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Weather, as usual, is a confounding factor in the forest insect and disease situation this year. In some areas -- southern New England, for example -- the long drought in June and July has aggravated the injury to trees by pests. Elsewhere -- northern New England, for example -- rainfall has been quite adequate and the growing season in general a very good one. The different weather patterns have been favorable in some cases for the development and survival of important insect and disease pests, and extremely unfavorable in others. The wide divergence in weather conditions, precipitation, particularly, in the different portions of the region may result in an unusually difficult job of evaluation and prediction.

FOREST INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana) The area of infestation in northern Maine has contracted somewhat in the southerly portion. Defoliation was light to negligible in most of Washington, Penobscot, and Hancock Counties and in Aroostook County south of Moulton. The infestation around Lambert Lake and Vanceboro, which appears to be continuous with the New Brunswick infestation, is still of moderate intensity, however. Higher populations and more severe defoliation occurred in the generally-infested area in northeastern Maine. The area of heaviest attack is about the same as in 1956, extending from the Fish River chain of Lakes south and southwestward to Squapan Lake and the Aroostook River. First classified as medium defoliation by aerial survey, much of this area was shown by ground survey to contain heavy feeding. The budworm egg mass survey in Maine was started on July 23 and will take about 3 weeks to complete. Light populations of spruce budworm were found in Coos County, New Hampshire, during a survey conducted June 25-27. The budworm reported earlier infesting Virginia pine in Pennsylvania has been identified by a specialist at the U.S. National Museum as Choristoneura fumiferana. This is an interesting find.

PINE SAWFLIES Time and cost figures for the Virginia pine sawfly aerial survey in Maryland, reported in the last issue of the Northeastern Forest Pest Reporter, may be of interest here. The total area covered was about 1,494,000 acres; flying time totalled 16 hours; cost (including summarization of the data) was $375., or 25¢ per 1000 acres. The airplanes used on this survey were a Cessna 195 and a Piper PA-18A. A heavy infestation of the red-headed pine sawfly, Neodiprion lecontei, in a 50-acre red pine planting in Saratoga County, New York, was sprayed with DDT with good results. Other scattered infestation in Saratoga County were treated also.

SHOOT AND TIP MOTHS European pine shootmoth (Rhyacionia buoliana) again abundant in southern Connecticut and New York, northern New Jersey, and Delaware, Pennsylvania, and West Virginia. In West Virginia populations were reported as medium to heavy in 12 counties, heaviest in the Northern Panhandle. A statewide survey of damage to young red pines in Pennsylvania is planned for late August. Nantucket pine tipmoth (R. frustrana) continuing at a damaging level in Delaware, Maryland, and West Virginia. Light infestations of R. rigidana reported in West Virginia and Pennsylvania. The leaders of planted Scotch pines near Knauers, Pennsylvania, have been injured by a tip borer, Eucosma sp., probably sonomana.

PINE TORTOISE SCALE (Toumeyella numismaticum) The Malathion spray applications against the crawler stage of this insect at Beltsville, Maryland, and the Shawnee State Park, Pennsylvania, in mid-May have been reported as very successful. In Mineral County, West Virginia, heavy infestations were causing serious injury and some mortality of Virginia pines, but these populations were practically eliminated by predators by June 26. Predators were found very abundant in the Beltsville area also. In the latter area, a second generation hatched about July 10.

PINE SPITTLEBUG (Aphrophora parallela) Heavy on white and Scotch pines in Essex County, New York. A small Scotch pine plantation was sprayed with Methoxychlor, good control reported. Severe infestations this year in Pennsylvania have caused much concern to Christmas tree growers. The Saratoga spittlebug (A. saratogensis) is prevalent in Venango, Warren, McKean, Crawford, Clearfield, and Erie Counties, Pennsylvania. Adults observed on loblolly pine at Petersburg, Delaware, about July 1.

MISCELLANEOUS INSECTS ON CONIFERS Bagworm (Thyridopteryx ephemeraeformis) very abundant on numerous coniferous and deciduous tree species in Delaware, Maryland, and New Jersey, light in West Virginia. Small infestations of Ips reported on red pine from various locations in New York. The bark beetles Orthotomicus caelatus and Pityogenes hopkinsi delivered a coup-de-grace to some white pines in Thatcher Park, New York - the trees had been much weakened by drought and mechanical injury by picnickers. A pine chafer (Anomala oblivia) was found attacking new foliage of Virginia pine near Bedford, Pennsylvania. Light to medium twig feeding on white pine over 4 acres by Glyptoscelis pubescens

occurred at Parker Dam, Pennsylvania, the first week of July. The larch sawfly (Pristiphora erichsonii) severely defoliated a Japanese larch planting between Renovo and Lock Haven, Pennsylvania. The undescribed species of Matsucoccus reported on white pine in New Hampshire in 1956 was much more sparse this year. The associated fungus, Septobasidium pinicola, is particularly common in dense stands, however.

SADDLED PROMINENT (Heterocampa guttivitta) Heavy infestation in Merrimack County, New Hampshire, declined this year. Early instar larvae were found in moderate numbers on June 27, but last instar larvae were scarce on July 30 with considerable evidence of parasitism present. No evidence of this insect in eastern Rensselaer County, New York, where it has caused defoliation for 4 years. One persistent spot on the Massachusetts-New York line was aerially sprayed in June by the State of Massachusetts, operation apparently successful.

CANKERWORMS An outbreak of cankerworm has been reported on Long Island; the exact extent of this has not been determined. Infestations in Massachusetts generally lighter than expected, with the exception of a serious build-up of spring cankerworm (Paleacrita vernata) on Martha's Vineyard which may require control measures in 1958.

GYPSY MOTH (Porthetria dispar) Completion of the 1957 cooperative Federal-State eradication program in the Northeast was reported in the last issue. Spraying under State contracts was completed on 105,820 acres in Pennsylvania; 200,000 acres in New York; 53,874 acres in Connecticut; 120,000 acres in Massachusetts; 16,300 acres in Rhode Island; 100 acres in New Hampshire (Coop. Econ. Ins. Rept. 7(20): 582). An area of 20 acres was heavily defoliated, 3 miles northwest of White Haven, Pennsylvania. This spot was outside the 1957 control area; larvae, pupae, and adults were present on July 5. The aerial spraying program in Massachusetts was the smallest in 10 years -- one spot undiscovered in time for spraying is now being used for pupal collection. Present trapping indicates an increase in populations in Plymouth County. The infestation in New Hampshire is reported at the lowest ebb in several years -- severe winter temperatures and a late May frost considered important in reducing populations.

MAPLE LEAF CUTTER (Paraclemensia acerifoliella) Continuing as a serious problem in Vermont. Scattered, small infestation reported in northwestern Massachusetts.

MISCELLANEOUS INSECTS ON HARDWOODS The locust leaf miner (Chalepus dorsalis) causing noticeable browning and defoliation throughout New Jersey, Delaware, Maryland, West Virginia, and southern Pennsylvania -- adults flying in York, Pennsylvania area in mid-July. Satin moth (Stilpnotia salicis) reported at scattered locations in New York -- 75% defoliation on small areas in Essex County. The locust borer (Megacyllene robiniae) is causing severe damage to black locust in many locations in West Virginia. Fall webworm (Hyphantria cunea) nests

conspicuous on various tree species throughout most states in the region, light infestations only in West Virginia. Oak leaf miners (Cameraria sp.) reported prevalent in eastern Massachusetts, Rhode Island, and West Virginia. The oak leaf skeletonizer (Bucculatrix ainsliella) prevalent in eastern Massachusetts. Forest tent caterpillar (Malacosoma disstria) detected in large numbers in Randolph, Webster, and Nicholas Counties and lesser numbers in Mineral and Hampshire Counties, West Virginia. The oecophorid (Psilocorsis faginella) has caused up to 30% defoliation of beech trees in the vicinity of Newark, Delaware. The hackberry psyllid (Pachypsylla sp.) has caused conspicuous injury to hackberry foliage in Pennsylvania and Rhode Island.

FOREST DISEASES

BLISTER RUST OF WHITE PINE (Cronartium ribicola) West Virginia reports a majority of areas now on maintenance. Pennsylvania and Maine both report heavy Ribes infection with defoliation resulting this year. This confirms earlier indications of heavy Ribes infection noted in the previous issue of the Northeastern Forest Pest Reporter. There are no reports of what effect the widespread 1957 drought may have on infection of pines.

NEEDLE RUST (Coleosporium solidaginis) West Virginia reports the rust from seven red pine plantations. See previous issue of the "Pest Reporter".

MISCELLANEOUS RUSTS Massachusetts reports Gymnosporangium clavariaeforme on Juniperus communis from Montague, and G. clavipes on the same host from Falmouth. Other Gymnosporangium sp. occurred on J. communis and J. virginiana from Monson and Whately, Massachusetts. The sudden wet weather during May apparently brought the cedar-apple rust (G. juniperi-virginianae) fruiting bodies out simultaneously over wide areas and more than usual to the attention of the public.

ASH LEAF RUST (Puccinia sparganioides = P. peridermiospora) Maine, Massachusetts, and New Hampshire all report little damage from ash leaf rust this season. It is believed drought conditions suppressed the usually severe infections on ash in their respective coastal areas.

NEEDLE DISEASES (Adelopus gaumanni and Rhabdocline pseudotsugae) continue to fruit abundantly on Douglas-fir needles in Vermont, and probably elsewhere.

ROOT ROT (Fomes annosus) This has been reported on red pine from the Fox Forest, Hillsboro, New Hampshire. So far as is known, this is the first time F. annosus has been reported from New Hampshire, although records in New Haven show that Dr. Perley Spaulding collected the fungus from white pine near Peterboro in May, 1930. This collection was probably not formally reported. F. annosus infecting red pine, reported from New York in the previous issue of the Pest Reporter, has been confirmed.

ANTHRACNOSE (Gloeosporium spp.) Massachusetts reports that early season rains stimulated development of anthracnose diseases on several tree species, until the mid-summer drought slowed the progress of the leaf diseases. A Gloeosporium occurred on Fagus sylvatica purpurea from Great Barrington, on Acer sp. from Southbridge, on linden from North Scituate, on Quercus alba from Whately and Northampton. An anthracnose also followed frost injury on Abies balsamea in Greenfield, Salix babylonica in Great Barrington, Quercus alba in West Springfield, Acer saccharum in Monson, and Crataegus sp. in Longmeadow. Pennsylvania reports anthracnose of red oak caused about 95% defoliation and infections of second leaves and twigs in the vicinity of North Springfield; also, that several years' infections of sugar maple by anthracnose, tar spot, etc., are suspected of resulting in a dieback condition of maples in the Wellsboro area. Anthracnose was prevalent and more or less limited to this species in Clarion and Jefferson Counties, according to another Pennsylvania reporter.

NECTRIA CANKERS (Nectria sp.) Massachusetts reports Nectria on maples from East Lynn and Brookfield. West Virginia reports heavy cankering on black walnut and the destruction of one 2-year-old plantation in Tucker County.

CYTOSPORA CANKERS (Cytospora sp.) New Hampshire reports Cytospora canker of native red spruce less frequent than in previous years. Massachusetts reports small willows (Salix sp.) and large mature spruce (Picea abies) killed by trunk cankers in Amherst and Agawam, respectively. Branches of Picea sp. were killed back in Milton, Longmeadow, and West Springfield; of Acer saccharum in Russell; of Picea abies in Plainfield; of Morus sp. in South Deerfield; and of Pinus strobus in Northampton.

BLACK KNOT (Dibotryon morbosum) Fresh infections are reported on Prunus sp. from Florence, Massachusetts.

WOOD ROTS West Virginia reports sterile conks of Poria obliqua on yellow birch in several eastern counties; also, from Panther Knob, Pendleton County at 4500 feet elevation. Massachusetts reports the death of Acer saccharum from Fomes applanatus with Cytospora and Steganosporium sp. fruiting abundantly on dead twigs; also, Acer saccharum, A. rubrum and Quercus sp. killed by Armillaria mellea; also, Polyporus cinnabarinus on wild cherry.

VERTICILLIUM WILT. Is reported more common this season than last by Massachusetts personnel. New Hampshire reports Verticillium as being one of the causes of the maple dieback complex.

OAK WILT (Ceratocystis fagacearum) West Virginia reports oak wilt from five additional counties, or in 44 out of the 55 counties in the State. The number of processed trees is about the same as during 1956, but field crews do not have as heavy a backlog of unchecked sites. Aerial surveying time has been more than doubled this year.

Fusicoccum castaneum was reported on twigs of Castanea mollissima from Williamstown, Massachusetts.

BLEEDING CANKER (Phytophthora sp.) This disease apparently accounts for a small percentage of maple troubles in New Hampshire, where it also is reported as a bleeding canker on beech, with perhaps the same organism (P. cactorum) as its cause. Symptoms on beech are similar to those on maple. Infected beech wood has a distinct odor of sardines. Another New Hampshire report ascribes noticeable mortality of sugar maples resulting from bleeding canker infections of the past 2 years.

LEAF BLOTCH AND WITCHES' BROOM of Serviceberry (Apiosporina collinsii) Inspection of a Massachusetts locality where this disease was known to be present in previous years has revealed severe infections on serviceberry this year.

WITCHES' BROOM of Prunus sp. Witches' brooms on Prunus sp. are widespread and abundant. The drought is apparently responsible for symptoms of the disease caused by Taphrina sp. being more conspicuous than usual. Among the many species of Taphrina affecting a variety of hardwood hosts, T. cerasi seems especially abundant and widespread.

X-DISEASE The dry summer has made symptoms of this virus on wild cherry especially conspicuous this year throughout the Northeast.

OBSERVATIONS OF DISEASES OF UNKNOWN OR NON-PARASITIC CAUSES

OAK DIEBACK West Virginia reports scarlet oak shows no symptoms as yet; however, symptoms usually do not show up until about the second week of August. Several square miles of trees showing symptoms last year for the first time are totally dead. White oaks are now starting to succumb in several of the areas.

WHITE PINE NEEDLE BLIGHT This is reported as rather heavy this year in Greenbrier and Pocahontas counties in West Virginia. In New Hampshire a few scattered trees show needle blight, but not as many as in 1954. Often the same trees as in 1954 show symptoms, especially the chronic cases with short needles. Scattered trees with needle blight symptoms are generally evident throughout the northeastern states, though 1957 would not be considered as a bad "blight" year.

DEAD LARCH Small scattered patches of dead larch trees were noticed in the coastal areas of Maine, especially in the Wiscasset region. Many seem to be infested with bark beetles, and Polyporus schweinitzii has been found associated with dead trees in some of the areas.

MISCELLANEOUS WINTER and/or FROST INJURY was light to heavy statewide in West Virginia. Frosted beech has been slow in recovering from FROST DAMAGE throughout most of the New England states. New Hampshire reports a good deal of SUGAR MAPLE MORTALITY in recent years. Dying roadside maples may be partly due to prolonged use of salt and calcium chloride on roads during winter, although the complex is apparently due to a variety of causes, one of which may be Verticillium. Sugar bush trees

in southern Vermont are in bad condition in some places, although their condition is much better in the northern half of the State. DYING HEMLOCK in New Hampshire is believed to be due to SALT INJURY in many cases. Massachusetts reports many instances of miscellaneous troubles including FROST INJURY and WINTER INJURY on Rhododendron, Crataegus, Acer saccharum, Syringa vulgaris, Quercus sp., Abies balsamea, and on purpurea and pendula varieties of Fagus sylvatica. CONSTRUCTION INJURY is common on maples from many parts of the state. SCORCH-killed specimens of Tsuga canadensis were reported in Southhampton from a swampy area overlying a hardpan, and of Aesculus hippocastanum from Amherst and Belmont. RABBIT INJURY to Cornus florida occurred in Greenfield. TRANSPLANTING TOO DEEP is reported for killed-back specimens of Betula papyrifera, Picea pungens glauca, Acer saccharum and B. populifolia. GAS LEAKS have killed elms and maples in Turners Falls and West Springfield, respectively. Massachusetts also reports the HEAVY SEED SET has weakened Acer saccharinum in the Amherst area and Ulmus parvifolia in Northhampton. DIEBACK of Acer saccharum due to DROUGHT and alternating high water table is reported.

DROUGHT EFFECTS The dryness of the past summer has apparently accentuated many tree troubles, such as the wilt diseases and dieback troubles, as evidenced by Dutch elm disease, Verticillium, etc. At the same time, it has apparently suppressed certain diseases such as ash leaf rust, horsechestnut blight, etc. Trees of many species are showing more severe dieback symptoms this year because of the drought. We subscribe to a statement received from the Shade Tree Laboratories, University of Massachusetts, which states "effects of the present drought may be expected to show up as tree troubles this fall, next year, and in succeeding seasons, as weakened trees succumb to weak parasites".

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